

VETROV, A.V.

Calculations according to the limiting state of flexible wooden  
rods. Trudy GISA no.30:157-171 '61 (MIRA 16:9)

VETROV, A.V., kand.tekhn.nauk

~~New types of metal joints for bearing wooden members. Trudy GISH~~  
no.25:61-71 '56. (MIRA 11:5)  
(Framing (Building)) (Building, Wooden)

BARDUS, A.M., inzh.; VETROV, B.A., inzh.

Temporary bolting of main workings in the Western Donets Basin  
mines. Bezop.truda v prom. 5 no.9:24-26 S '61. (MIRA 14:10)

1. Trest Pavlogradshakhtstroy.  
(Donets Basin--Mine roof bolting)

POFANOV, A.A., kand.tekhn.nauk; LEYSOV, Ye.I., inzh.; YEL'KIN, S.A., inzh.;  
MILYAYEV, M.N., inzh.; PASTUKHOV, A.I., kand.tekhn.nauk; DZEMYAN,  
S.K., inzh.; KOSNAREV, A.S., inzh.; KLEYN, A.L., kand.tekhn.nauk;  
DANILOV, A.M., inzh.; FILIPPOV, A.S., kand.tekhn.nauk; SALTANOV,  
G.F., inzh.; VETROV, B.G., inzh.; PISARENKO, G.A., kand.tekhn.nauk;  
RADYA, V.S., inzh.; GEROTSKIY, V.A., inzh.

In the Ural Mountain Region Scientific Research Institute for  
Ferrous Metals. Stal' 22 no.10:892,916,938,953 0'62. (MIRA 15:10)  
(Ural Mountain region—Metallurgical research)

*VETROV, B. N.*

USSR/Atomic and Molecular Physics - Heat, D-4

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34398

Author: Vetrov, B. N., Todes, O. M.

Institution: None

Title: Heat Transfer in Tubes with Packing

Original Periodical: Zh. tekhn. fiziki, 1956, 26, No 4, 800-808

Abstract: An experimental investigation was made of the heat transfer from air to the walls of a tube, filled with granular packing. The charge used was lead shot 2 mm in diameter, quartz sand with an average particle diameter of 1 and 3 mm, and steel balls 6 mm in diameter. Experiments with sand were carried out for a range of Reynolds numbers from 0 to 245; the obtained values of the heat transfer coefficient ranged from 16.2 to 48 kcal/m<sup>2</sup>hr deg. In experiments with steel balls, the range of Reynolds numbers was extended to  $Re = 632$ ;  $\alpha = 25.6 - 90$  kcal/m<sup>2</sup>hr deg. The experiment carried out with shot gave approximately the same results as for steel balls. In experiments with increasing values of Reynolds numbers, only a slow gradual increase in  $\alpha$  with stream speed, was observed and not a direct proportionality to the latter. In the laminar region, the coefficient of heat transfer

USSR/Atcmic and Molecular Physics - Heat, D-4

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34398

Author: Vetrov, B. N., Todes, O. M.

Institution: None

Title: Heat Transfer in Tubes with Packing

Original Periodical: Zh. tekhn. fiziki, 1956, 26, No 4, 800-808

Abstract: approaches a constant value, determined by the effective heat conductivity of the packing.

VITEROV, B.N.; TODES, O.M.

Heat transmission in capped tubes. Zhur.tekh.fiz. 26 no.4:800-808  
Ap '56. (MLRA 9:8)

(Heat--Transmission)

SUBJECT USSR / PHYSICS  
AUTHOR VETROV, B.N., TODES, O.M.  
TITLE The Heat Transfer in Tubes with Depositions.  
PERIODICAL Zurn. techn. fis., 26, fasc. 4, 800-808 (1956)  
Publ. 4 / 1956 reviewed 9 / 1956

CARD 1 / 2

PA - 1257

Theoretical analysis of the problem: The present work theoretically and experimentally investigates the heat transfer from a moved gas and from an immovable layer of solid particles to the walls of a tube. The velocity of the steady heat exchange through the wall of the tube is essentially determined by the effective heat conductivity  $\mathcal{K}_e$  of the layer. In the case of  $d/D > 1/12$  the dependence of the NUSSELT number on an additional criterion for  $d/D$  must be considered. If the material of the deposited particles is not too much heat conductive, another criterion for  $\mathcal{K}_e / \mathcal{K}_s$  must yet be considered. Here  $d$  denotes the diameter of the deposited particles,  $D$  - diameter of the tube,  $\mathcal{K}_g$  and  $\mathcal{K}_s$  heat conductivity of the gas and of the solid particles respectively. In the case of a flowing gas REYNOLD'S and PRANDTL'S numbers must in addition be taken into account.

Experimental methods are discussed on the basis of a drawing showing the test order which, essentially, consists of a brass cylinder enclosed by an exterior shell through which water from the main flows. The height of the deposited layer can be regulated by means of a grid. Several thermopiles introduced into the cylinder through transversal channels leading through the shell

Zurn.techn.fis, 26, fasc. 4, 800-808 (1956) CARD 2 / 2 PA - 1257  
measure the difference in temperatures in the interior of the cylinder and  
in the surrounding medium.

Experimental results: A certain concrete experiment finished the following  
data: Air consumption - 91 litres per minute,  $= 5,45 \text{ m}^3/\text{hour}$ . The flow  
velocity computed herefrom amounts to  $1090 \text{ m/hour}$ . The temperatures indicated  
by the thermopiles after temperature distribution has become steady are shown  
in a table. The coefficient of heat transfer from the cylindrical layer to  
the walls is then  $25,7 \text{ KKal/m}^2.\text{hour.grad}$ , and REYNOLD'S number on the occasion  
of this experiment amounts to 52,5. The results of all experiments which were  
carried out with sand are shown together in a table. At  $Re < 50$  the values of  
the heat transfer coefficient fluctuate about  $20 \text{ KKal/m}^2.\text{hour.grad}$ . A special  
test carried out at  $Re = 0$  by the method of quasistationary cooling of the  
entire tube furnishes the value  $16,2 \text{ KKal/m}^2.\text{hour.grad}$  for these coefficients.  
At  $Re \rightarrow \infty$  this coefficient probably tends towards the value 16, which agrees  
well with the data of other tests. Tests carried out in a similar manner with  
steel balls of 6 mm diameter (porosity  $\varepsilon = 0,40$ ) furnish a value of  $\sim 22$   
for the heat transfer coefficient at  $Re \rightarrow 0$ . Similar results were obtained  
also with shot with  $d = 2 \text{ mm}$ .

INSTITUTION:

*VETROV-B1N*

1968. Vetrov, B. N. and Todes, O. M. Propagation of heat waves  
due to the heating up of furnace charges by a gas flow, III, (in Russian), *Zh. tekhn. fiz.*, 25, 7, 1242-1247, July 1959.

This is the third and the final paper by the same authors on the subject of finding the coefficient of heat transfer from a hot gas flowing through a granulated material along a cylindrical vessel. The other papers appeared in the same issue of the same source, 25, 7, July 1959, and are being reviewed currently. In the first paper under the title: "Measuring the coefficient of heat transfer from a flowing gas to a furnace charge," authors assumed only forced convection and neglected heat transfer by conduction. In the second paper under the title: "Heating granulated material by conduction along a cylindrical vessel at non-adiabatic conditions," authors describe an investigation of heat transfer along the same charge by conduction only. In this report, authors present the mathematical solution of the heat equation with boundary conditions existing in their experimental set-up, in which they take into account both forced convection and conductivity along the vessel. The solution giving the temperature as a function of time and distance from the front of the charge provides a formula for finding the convection heat transfer from the gas and the conductivity of the charge. As the conductivity at small velocities (small Reynolds numbers) cannot be neglected, authors propose a modified Nusselt number which would take this into account for small values of Reynolds number (in the relation Nusselt number-Reynolds number for forced convection). This would enable people in industry to evaluate directly the width of the heat wave in which they are mainly interested, without bothering about convection and conduction.

*T. Lesser, USA*

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VETROV, B.N.

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✓1967. Vetrov, B. N. and Todes, O. M., Heating granulated material by convection along a cylindrical vessel at non-adiabatic conditions. II. (in Russian) 25, Issh. Fix. 25, 7, 1232-1241, July 1955.

This paper is the second one on the same subject published in the same issue of title source, 25, 7, July 1955. In the first paper, under the title "Measuring the coefficient of heat transfer from a flowing gas to a furnace charge," authors report on their investigations of heating a charge of granulated material in a cylindrical vessel by blowing hot air through it. The measurements gave a temperature-time curve from which authors evaluated heat transfer and other thermal coefficients of the charge, assuming heat transfer by forced convection only and neglecting heat conduction. At large gas velocities, the thermal coefficients found experimentally gave good agreement with the established Nusselt number-Reynolds number relation for the forced convection. At small velocities, discrepancies appeared, due to conduction heat transfer along the charge itself, which was negligible at large velocities as compared with the forced convection heat transfer from the gas to the charge, but not so at small gas velocities.

In this paper, authors present results of heating a charge of granulated material by conduction only along the same cylindrical vessel. Theoretical solution was obtained in two stages. The first approximation was obtained by assuming that the charge is a solid cylinder (instead of porous granulated mass), and the boundary-value problem for the actual case was solved with the help of this first approximation. The experiments consist of heating only the front of the charge and letting the heat be transferred by conduction along the charge (not letting the hot air through it), and plotting temperature-time curves. The experimental results agree with the theoretical solutions and authors are able to introduce a correction in their original results to make them agree with Nusselt number-Reynolds number relation.

T. Leser, USA

*(Signature)*

USSR/Physics - Thermodynamics, Applied

Vetrov, B. N.

FD-3200

Card 1/1 Pub. 153-9/28

Author : Vetrov B. N. and Todes O. M.

Title : Measurement of heat emission coefficient from a gas flow to the furnace charge in conditions of non adiabatic heating. I.

Periodical : Zhur. Tekh. Fiz., 25, No 7, 1217-1231, 1955

Abstract : An indirect method is applied for determining the coefficient of heat emission by a hot gas stream to the furnace charge by comparing experimental with theoretical curves. The theoretical results were improved by deriving a formula for computing the volume coefficient of heat emission in real, i.e. non adiabatic conditions. These theoretical results agree with experimental data. Ten references, including 5 foreign.

Institution :

Submitted : June 5, 1954

USSR/Physics - Thermodynamics, Applied

VETROV, B. N.

FD-3201

Card 1/1

Pub. 153-10/28

Author

: Vetrov, B. N. and Todes, O. M.

Title

: Conductive heat transfer along granulated material in a pipe in non adiabatic conditions. II.

Periodical

: Zhur. Tekh. Fiz., 25, No 7, 1232-1241, 1955

Abstract : A heat wave was theoretically deduced originating in heating of one end of pipe filled with granulated material and cooled on its lateral surface. The height of this wave decreases exponentially while the wave front moves with constant speed. Tests carried out on several pipes filled with steel balls or quartz sand confirmed the theoretical anticipations. Two references.

Institution :

Submitted : June 5, 1954

USSR/Physics - Thermodynamics, Applied

VETROV, B. N.

FD-3202

Card 1/1      Pub. 153-11/28

Author      : Vetrov B. N. and Todes O. M.

Title      : Heat wave propagation during heating of the furnace charge by a gas stream. III.

Periodical      : Zhur. Tekh. Fiz., 25, No 7, 1242-1247, 1955

Abstract      : The two previous articles are generalized to a case of heat exchange between the gas stream and the furnace charge in non adiabatic conditions taking into account the conductive heat transfer along the charge. The previously derived equations of thermal equilibrium are used for analysis. Reference is made to the two previous articles by authors.

Institution      :

Submitted      : June 5, 1954

*VETROV B.M.*

VETROV, B.M.; TOLRS, O.M.

Measurement of the coefficient of heat emission from the gas flow  
to the furnace charge in nonadiabatic heating-up conditions.  
Zhur.tekh.fiz.25 no.7:1217-1231 J1'55. (MIRA 8:10)  
(Heat--Transmission) (Smelting furnaces)

VETROV, B.N.

VETROV, B.N.; TODES, O.M.

Heating-up by means of the longitudinal heat conductivity of  
granulated materials located in a tube under nonadiabatic  
conditions. Part 2. Zhur.tekh.fiz.25 no.7:1232 J1'55.  
(MLRA 8:10)  
(Heat--Transmission) (Smelting furnaces)

*VETROV, B.Ya.*

MATSUK, Yu.P., inzhener; VETROV, B.Ya., inzhener.

Using all for cooling barrel cylinders of EP screw presses.  
(MIRA 10:7)  
Mael.-zhir.prom. 23 no.6:13-14 '57.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivot (for Matsuk).
2. Nevinnomyskiy maslozavod (for Vetrov).  
(Oil industries--Equipment and supplies)

VETROV, B.Ya., inzhener

Structural changes in the screw press for preliminary removal of  
oil. Masl.-zhir.prom.20 no.5:28 '55. (MIRA 8:11)

1. Nevinnomyskiy maslozavod  
(Power presses) (Oil industries--Equipment and supplies)

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859620019-0

VETROY, D., inzh.

Postman of the planet Earth. Znan. sila 36 no.12:13-16 D '61.  
(MIRA 15:1)

(Communication and traffic)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859620019-0"

AUTHORS: Vetrov, D.S., and Soroka, I.N. SOV/19-58-6-629/685

TITLE: A Device for Putting Explosive Shells Into Blast  
Drill Holes (Ustroystvo dlya podachi patronov VV  
vo vzryvnyye skvazhiny)

PERIODICAL: Byulleten' izobreteniy, 1958, Nr 6, p 139 (USSR)

ABSTRACT: Class 78e, 1. Nr 113735 (584756 of 17 Oct 1957).  
Submitted to the Committee for Inventions and Dis-  
coveries at the Ministers Council of USSR. A de-  
vice for mechanized loading of explosive shells  
into drill holes; including a pneumatic cylinder  
with a piston and rod provided with friction grips  
for rods; moving the explosive charge by compressed  
air actuating the piston rod.

Card 1/1

VETROV, D.S., gornyy inzhener; SOROKA, I.N., inzhener-mekhanik

New techniques of charging upraise holes. Gor. zhur. no.5:71-72  
My '60. (MIRA 14:3)

1. Leninogorskiy polemetallicheskiy kombinat.  
(Blasting---Equipment and supplies)

AUTHOR:

Vetrov, D.S.

SOV/19-58-6-663/685

TITLE:

A Device for Removing Frozen Material From Bodies of Transport Vehicles (Ustroystvo dlya osvobozhdeniya kuzovov transportnykh povozenok ot primerzshego k nim materiala)

PERIODICAL:

Byulleten' izobreteniy, 1958, Nr 6, p 147 (USSR)

ABSTRACT:

Class 81e, 104. Nr 113429 (585979 of 10 Nov 1957). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. A device with a striking tool on an inclined swivelling and reciprocatively mobile rod controlled by pneumatic plungers, designed to knock frozen material off dumping vehicles; the device can thus be used for unloading vehicles with tip-up bodies. In another variation a pneumatic shovel is used as a striking instrument.

Card 1/1

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859620019-0

VETROV, G.P.; KAL'FUS, M.K.

Long-distance piping of air to an oxygen sec.ion. Kislorod 10 no.5:  
(MIRA 11:4)  
24-25 '57.

(Oxygen) (Air)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859620019-0"

L 27948-66

ACC NR: AP6017708

SOURCE CODE: UR/0105/66/000/001/0085/0086

AUTHOR: Bertinov, A. I.; Voronetskiy, B. B.; Gendel'man, B. R.; Girshberg, V. V.; Gromov, V. I.; Druzhinin, N. N.; Kunitskiy, N. P.; Naumenko, I. Ye.; Petrov, I. I.; Vetrov, G. N.; Rusakov, V. G.; Silayev, E. F.; Slezhanovskiy, O. V.; Syromyatnikov, I. A.; Tulin, V. S.; Filin, N. M.; Tselikov, A. I.; Chilikin, M. G.; Yun'kov, M. G.

ORG: none

TITLE: Engineer N. A. Tishchenko (on his 60th birthday)SOURCE: Elektrichestvo, no. 1, 1966, 85-86

TOPIC TAGS: electric engineering personnel, metallurgic furnace, electric equipment

ABSTRACT: Nikolay Afanas'yevich Tishchenko completed the Khar'kov Electrotechnical Institute in 1930, after working as an electrician in a Metallurgical plant from 1923-1926. He was active in the development of domestically produced electrical equipment for rolling mills and metallurgical furnace works. He was active during WWII in restoring electrical equipment damaged by the Germans. After the war, he was active in developing electrical drive equipment for both domestic and foreign metallurgical plants. He has been active in scientific work, publishing over 45 works in such varied fields as electric drives, equipment reliability and productivity of labor. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09, 13 / SUBM. DATE: none

UDC: 621.34

Card 1/1 BLG

67-5-5/12

AUTHORS:

Vetrov, G. P., Kal'fus, M. K.

TITLE:

The Practice of Remote Air Supply of an Oxygen Plant by  
Means of a Pipeline (Praktika zabra v ozdukha kislorodnym  
tsel'hom po truboprovodu na dal' nem rasstoyanii).

PERIODICAL:

Kislorod, 1957, Nr 5, pp. 24-25 (USSR)

ABSTRACT:

In the factory area of the Plant for Synthetic Caoutchouc in Karaganda there are beside the technological halls two more great carbide halls as well as halls for the production of great quantities of acetylene, which serve also for its hydration to acetyldehyde. During production in these halls it is unavoidable that acetylene is constantly effused into the air. The air fractionating blocks are equipped with acetylene adsorbers. These could, however, not save the plants from an explosion in 1953. Of late, after the installation of the new pipeline, the adsorbers are not longer switched on. The remote air-supply, as a protection against air impurities, was introduced in 1949. From the working practice of the oxygen plant it was seen that the remote air-supply sufficiently protects the air fractionating apparatus against acetylene accumulation. The cases where the acetylene analysis was positive became more rare. The analyses were made three times a day by means

Card 1/2

The Practice of Remote Air Supply of an Oxygen Plant by  
Means of a Pipeline.

67-5-5/12

of the condensation-calorimetric method. In connection with the air-supply from the area of the oxygen plant the authors also investigated the wind directions and their influence on the accumulation of acetylene in the apparatus in the course of 13 days. On this occasion it turned out that the wind direction as well as the distance between the air fractionating hall and the source of impurity influence the accumulation of acetylene in the apparatus. When the pipeline for the air-supply is sufficiently distant from the production site of acetylene it can not completely avoid the entrance and the accumulation of acetylene but it can decrease its content in the apparatus. There is 1 table.

AVAILABLE: Library of Congress

1. Acetylene-Determination 2. Air-Purification

Card 2/2

VETROV, I. [Vietrov, I.], inzh.

New diesel locomotive. Znan. ta pratsia no. 1:15 Ja '61.  
(MIRA 14:4)

(Diesel locomotives)

KUZ'MENKO, V.A. (Kiyev); VETROV, I.Ye., inzh. (Kiyev)

Traffic safety to be placed under public control. Zhel. dor.  
(MIRA 18:6)  
transp. 47 no.6:60-63 Je '65.

1. Zamestitel' nachal'nika sluzhby lokomotivnogo khozyaystva  
Yugo-Zapadnoy dorogi (for Kuz'menko).

VETROW, I.Ye.

Methods for better training of specialists for the operation of  
electric and diesel locomotives. Zhel.dor.transp. 44 no.7:42-  
44 Jl '62. (MIRA 15:8)

1. Zamestitel' nachal'nika Kiyevskoy tekhnicheskoy shkoly  
mashinistov lokomotivov.  
(Locomotive engineers--Education and training)

VETROV, I. Yu. [Vietrov, I. IU.]

Diesel locomotives with hydraulic drive. Nauka i zhystia 11  
no.2:14-15 F '61. (MIRA 14:3)  
(Diesel locomotives--Hydraulic drive)

VETROV, I.D., redaktor; KHOTENKO, A., tekhnicheskiy redaktor; TRUKHANOVA, A.,  
tekhnicheskiy redaktor

[Code of labor law of White Russia] Kodeks zakonov o trude  
Belorusskoi SSR. Ofitsial'nyi tekst s izmeneniyami na 1 sentiabria  
1956 goda i s prilozheniem sistematizirovannykh materialov. Minsk,  
Gos.izd-vo BSSR, 1957. 221 p. (MLRA 10:7)

(White Russia--Labor laws and legislation)

UFR 7-10

AUTHOR: Vetrov, I., Engineer (Baku)

84-12-35/49

TITLE: What Prevents Economizing Fuel (Что мешает экономить авиатопливо)

PERIODICAL: Grazhdanskaya aviatsiya, 1957, Nr 12, p 28 (USSR)

ABSTRACT: The author first refers to an unidentified operational unit, where fuel economy was achieved by means of proper adjustment of the fuel-injection assembly of the ASh-82FN engine, an exact computation of flights to comply with the schedule, the use of "cruising graphs", and optimum speeds of 45 to 60 per cent of the maximum output of the power plant. Criticism is directed against the Fuel Consumption Norms issued in February 1952, which are based on the actual flight time. The author demands that the distance covered will be made the basis of fuel allowances. Along with the plane crews, the maintenance workshops and the traffic control agencies are held responsible for fuel economy.

AVAILABLE: Library of Congress

Card 1/1

VETROV, IU. A.

Zemleroinye mashiny [Excavating machinery]. Kiev, Gostekhizdat UGSSR, 1952.

SO: Monthly List of Russian Accessions, Vol. 6 No. 8 November 1953

SERGEYEV, N.V.; VETROV, I.Ye.; DROZDOV, A.A., inzh., prepodavatel';  
SAVEL'YEV, S.T., inzh., prepodavatel'; SURKIS, M.N., inzh.,  
prepodavatel'; BULATOV, B.N., inzh., prepodavatel'; DUKLER, V.D.,  
inzh., prepodavatel'; FEL'DMAN, N.F., prepodavatel'

Once more about the training of locomotive servicing brigades.  
Elek. i tepl. tigr. 5 no.5:44 My '61. (MIRA 14:7)

1. Nachal'nik Kiyevskoy tekhnicheskoy shkoly (for Sergeyev).
2. Kandidat' nachal'nika Kiyevskoy tekhnicheskoy shkoly  
(for Vetrov). 3. Kiyevskaya tekhnicheskaya shkola (for  
Drozdov, Savel'yev, Surkis, Bulatov, Dukler, Fel'dman).  
(Railroads--Employees)  
(Locomotives--Maintenance and repair)

KRYLOV, A.P. (Kiyev); KUZ'MENKO, V.A. (Kiyev); VETROV, I.Ye., inzh.(Kiyev)

Larger volume of transportation with a smaller expenditure of fuel; from the experience of the Southwestern Railroad. Zhel. dor. transp. 45 no.3:70-72 Mr '63. (MIRA 16:6)

1. Nachal'nik sluzhby lokomotivnogo khozyaystva Yugo-Zapadnoy zheleznoy dorogi (for Krylov).
2. Nachal'nik lokomotivnogo depo Darnitsa Yugo-Zapadnoy zhuleznoy dorogi (for Kuz'menko).
3. Lokomotivnoye depo Darnitsa Yugo-Zapadnoy zheleznoy dorogi (for Vetrov).

(Railroads—Management)  
(Diesel locomotives)

VETRCV, I. Ye., inzh. (Kiyev)

Ways to reduce the expenditure of diesel fuel. Zhel. dor. transp.  
46 no. 10: 59-61 0 '64. (MIR 17:11)

ISAKOV, A.A. (Kemerovskaya oblast'); ZHURGARAYEV, Amangel'dy (Dzhambul'-skaya obl., KazSSR); VLADIMIROV, A. (Asbest); FRIMAN, L.I. (Yaroslavl'); KILIMNIK, Ya.Ye. (Vinnitsa); TEREKHOV, I.A. (Skopin); AKDAULETOV, N.A. (pos. Mertuk, KazSSR); ZAKHARKIN, V.Ye. (pos. Rudtsev, Tul'skaya oblast'); SHESTOPAL, G.A. (Moskva); KOTIY, O.A. (Yaroslavl'); GAUKHMAN, V.A. (Moskva); LOPSHITS, A.M. (Yaroslavl'); SERGUSHOV, S.A. (Yaroslavl'); GOTMAN, E.G. (Pechora); YETROY, K.V. (Putintsevo, Vostochno-Kazakhstanской обл.); MIKHELEVICH, Sh.Kh. (Daugavpils); SKOPETS, Z.A. (Yaroslavl'); RYBAKOV, L.M. (Yaroslavl'); CHEGODAYEV, A.I. (Gavrilov-Yam)

Problems. Mat.v shkole no.6:85-92 N-D '62. (MIRA 16:1)  
(Mathematics--Problems, Exercises, etc.)

VETROV, M.

Problems prompted by life. NTO 4 no.1:44-45 Ja '62.

(MIRA 15:1)

1. Zamestitel' predsedatelya soveta nauchno-tekhnicheskogo obshchestva  
Permskogo neftepererabatyvayushchego zavoda.  
(Perm--Petroleum refineries)

VETROV, M., polkovnik

Patriotic and international obligation. Voen. vest. 41 no.4:  
47-50 Ap '62. (MIRA 15:4)

(Russia--Armed forces)  
(Russia--Relations (General) with foreign countries)

VETKOV, Mikhail Sergeyevich; TSYBUREV, N.Y., red.; BELYAYEV, N.A.,  
tekhn.red.

[In Cambodia, ancient country of the Khmers], V Kambodzhe -  
drevnei strane Khmerov. Moskva, Izd-vo In-ta mezhunar.  
otnoshenii, 1958. 63 p. (MIRA 11:8)  
(Cambodia--Description and travel)

VETROV, N.

Paper made from reed. Tekh.mol 29 no.5:32 '61. (MIRA 14:5)  
(Reed products) (Paper industry)

VETROV, N. I.

Unused reserves. Elek. i tepl. tiaga no. 4:19-21 Ap '57.  
(MLRA 10:6)  
1. Glavnnyy inzhener sluzhby elektrifikatsii i energeticheskogo  
khozyaystva Moskovsko-Ryazanskoy dorogi.  
(Electric railroads--Wires and wiring)

BELYAYEV, Igor' Aleksandrovich; VAYNSHTEYN, Boris Zinov'yevich;  
YETROV, N.I., inzh., retsenzent; KALININ, V.K., kand.  
tekhn. nauk, red.; KHITROVA, N.A., tekhn. red.

[Mechanization of work and automation of systems in contact-  
network maintenance] Mekhanizatsiya rabot i avtomatizatsiya  
ustroistv na distantsiakh kontaktnoi seti. Moskva, Trans-  
zheldorizdat, 1963. 84 p. (MIRA 16:5)

(Electric railroads--Wires and wiring)

BELYAYEV, I.A., inzh.; VETROV, N.I., inzh.; MARGOLIS, S.M., inzh.;  
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tekhn. nauk, retsenzent; GORCHAKOVA, O.D., inzh., red.;  
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[Installation, operation and repair of overhead contact  
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[Decreasing the wear of contact wires; work practice of  
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KIL'MAN, Ya.I., kand. tekhn. nauk; KUZ', N.P.; VETROV, N.Ye.; ALEKSEYEV, M.U.

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carbonate. Trudy GIAP no.8:164-172 '57. (MIRA 12:9)  
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VETROV, Nikolay Ivanovich; PRUDYUS, A.S., inzh., red.; KHITROV, P.A.,  
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[Handbook for foremen and brigade leaders of the railroad contact  
network] Spravochnik mastera i brigadira kontaktnoi seti zheleznykh  
dorog. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soob-  
shcheniya, 1960. 262 p.  
(MIRA 13:5)  
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VETROV, Nikolay Ivanovich; BELYAYEV, I.A., inzhener, redaktor; BOBROVA, Ye.N.,  
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of the Moscow-Ryazan railroad] Remont kontaktnoi seti; opty raboty  
uchastka energosnabzheniya Moskovsko-Riazanskoi dorogi. Moskva,  
Gos. transp. zhel-dor. izd-vo 1956. 75 p. (MLRA 10:2)  
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(Electric railroads—Wires and wiring)

VETROV, Nikolay Ivanovich; BORZENKO, Ye.A., inzh., retsenzent;  
SIDOROV, N.I., inzh., red.; BOBROVA, Ye.N., tekhn. red.

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Ekspluatatsiia i remont kontaktnoi seti postoiannogo toka.  
Moskva, Transzheldorizdat, 1962. 166 p. (MIRA 15:9)  
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(Electric lines—Overhead)

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B02/ES14

9,6/50  
5/2000 (1043, 1227, 1272)  
86-2312  
86-1320

Sal'pon, V.L., Beloborodov, L.L., Zentsevren, G.D.,  
Frankovich, J.L., Vetrov, O.O., Lysikava, A.Ye.,  
Lavrovskaya, G.K., Tsvetkov, V.I., Grishina, V.P.,  
Skurat, V.F., and Tukhridin, A.Ia.

**TITLE:** The PYC-2 (BNC-2) Mass Spectrometer Designed for  
Studying Chemical Reactions and the Detonation of  
Free Radicals

**PERIODICAL:** *Prilozh. i. tekhnika eksperimenta*, 1960, No.6, pp.78-84

**TEXT:** A double magnetic mass-spectrometer designed for studying reactions in the gaseous phase and, in particular, for the determination of free radicals is described. Two methods are used to produce the ions. In the first method the mixture to be analyzed is ionized by charge transfer to specially produced ions. The latter are formed in a separate ion gun by means of electron bombardment and are mass-analyzed in a small magnetic analyzer. In the second method the mixture under consideration is ionized directly by electron bombardment. Quasi-monochromatization is achieved by a method based on that reported by For et al. (Ref.11). The gas from the "reactor" is introduced into the ion source in the Card 1/6

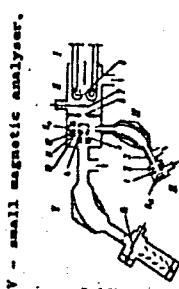
form of a molecular beam which is mechanically interrupted at a known frequency. In distinction to the method described by Pomer and Radchenko (Ref.2), in which the molecular and ion beams are perpendicular, in the present system the two beams are coaxial, which means that smaller voltages are necessary for the extraction of the ions from the ionization region and it is possible to reduce the intensity of the background mass-spectrum. A particular feature of the present instrument is the use (in the measuring part of the spectrometer) of K-tabilization of parameters such as the accelerating voltage, the voltage supplying the detector, the emission current of the ion gun cathode, and the supply voltage for the ion source cathode. This was described by the second of the present authors in Ref.10. The energy parameters are determined from a knowledge of the magnetic field which is measured with the help of a Hall probe (germanium crystal). The basic mass spectroscopic arrangement is shown in Fig.2. Products of chemical reactions taking place in the "reactor" I enter the region II through a small aperture in the thin glass diaphragm. a

**ASSOCIATION:** Institut Khimicheskoy Fiziki AN SSSR (Institute of  
Chemical Physics, AS, USSR)

**SUBMITTED:**

October 15, 1959

**PICTURE:** Card 5/6



ACCESSION NR: AP4020295

8/0139/64/000/001/0026/0031

AUTHORS: Vatroy, O. D.; Dekabrun, L. L.

TITLE: Pulse apparatus for measuring nuclear magnetic relaxation time

SOURCE: IVUZ. Fizika, no. 1, 1964, 26-31

TOPIC TAGS: nuclear relaxation, spin lattice, magnetic field, radio frequency, pulse generation, nuclear magnetization, precession, pulse modulator, amplifier

ABSTRACT: The construction details of a pulse-measuring instrument have been described. Measurement of a wide range of nuclear relaxation times  $T_1$  and  $T_2$  in liquids as well as in solid bodies is possible using this apparatus.  $T_1$  is the spin-lattice relaxation time and  $T_2$  is the spin-spin or transverse relaxation time. For both relaxation measurements the specimen is placed in a constant magnetic field  $H_0$  and, after attaining thermal equilibrium, is subjected to the action of radio frequency (rf) field  $H_1$  in the form of a direct pulse. The frequency field  $H_1$  must satisfy the resonance condition

Card 1/2

ACCESSION NR: AP4020295

$\gamma$ -gyromagnetic ratio. Under the rf field the nuclear magnetization vector departs from its equilibrium position by the angle  $\Theta$  where

$$\Theta = \gamma H_0 t_w.$$

A list of methods for measuring the relaxation time is given, consisting of measuring the decay of spin-echo amplitudes and the decay of free precession after the rf impulse. The block-diagram of an instrument for measuring the relaxation time is given. The specimen is bombarded by an rf pulse coming in from the amplifier capacity of a transmitting counter coil. The amplifier capacity is guided by a modulator which receives the pulses from a programmer. The time sequence of these pulses is determined experimentally by selecting a particular program. The instrument is also shown to be capable of measuring the self-diffusion coefficient. Orig. art. has: 4 formulas, 3 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 27Sep62

DATE ACQ: 31Mar64

ENCL: 00

SUB CODE: EC

NO REF Sov: 001

OTHER: 011

Card 2/2

VETROV, O.D.; DEKABRUN, L.L.

Pulse apparatus for measuring nuclear magnetic relaxation times.  
Izv. vys. ucheb. zav.; fiz. no.1:26-31 '64. (MIRA 17:3)

1. Moskovskiy inzhenerno-fizicheskiy institut.

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859620019-0

VETROV, O.D. (Moskva); DEKABRUN, L.L. (Moskva)

Multipurpose pulse train generator. Avtom. i telem. 24  
no.11:1589-1592 N '63. (MIRA 16:12)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859620019-0"

TAL'ROZE, V.L.; DEKABRUN, L.L.; TANTSYREV, G.D.; FRANKEVICH, Ye.L.;  
VETROV, O.D.; LYUBIMOVA, A.K.; LAVROVSKAYA, G.K.; YEROFEYEV, V.I.;  
GRISHIN, V.D.; SKURAT, V.Ye.; YUKHVIDIN, A.Ya.

Mass spectrometer HMS-2 for investigating chemical reactions and  
identifying free radicals. Prib. i tekhn. eksp. no.6:78-84 N-D  
'60. (MIRA 13:12)

1. Institut khimicheskoy fiziki AN SSSR.  
(Mass spectrometry) (Radicals (Chemistry))  
(Chemical reactions)

VETKOV, O. D.

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2022/23/14/12/06/000/006/021/045

232

Frankovich, Ye. I., Yakupov, G. D., Yurasheva, A. K.  
Lavrovskaya, G. E., Tarofskaya, V. I., Uralishin, V. D.  
Smurat, V. Ye. and Tekhnicheskaya, A. V.

**TITLE:** The PMC-2 (E95-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of  $\Delta H$  and  $\Delta S$  Values

PERIODICAL: *Prileby i estetika eksperimenta*, No. 6, 1902, 76-84

and reactions in the gaseous phase and, in particular, for the determination of free radicals is described. Two methods are used to produce the ions. In the first method the mixture to be analyzed is ionized by charge transfer to the latter are formed in a separate chamber and are subsequently introduced in a second magnetic analyzer.

The P74C-2 (EKG-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

In the form of a molecular beam. This molecular beam is collimated further by the diaphragm 6 which separates the volume II from the region in which ionization takes place. A removable screen 7 is placed in front of the diaphragm 6 and intercepts the molecular beam 33 times per sec. In the case of ionization by charge transfer, the primary ions are produced in the ion gas XII. The ion beam formed there is then analyzed in the 60° magnetic analyzer IV which has a working radius of 100 mm. The primary ion beam, consisting of ions of the required mass, intersects the molecular beam and charge transfer takes place. In the case of ionization by electron impact, the source consists of a cathode 10 and an anode 11. The source of the present authors in Ref. 9. In the case of ionization by a concentrated electric beam, the acceleration of the molecular beam is stopped by the stopper 7 and impeded. The ions current in the mass-spectrometer is measured either by a di. amplifier or an electron multiplier. The vacuum chamber of the mass-spectrometer is an all-metal system and the acetones are outgassed at 300 to 350°C before the operation is begun. As an illustration of

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859620019-0"

B676

B676/514  
B676/515

The PMC-2 (B676-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

The possible applications of the instrument, data are quoted on, the formation of free radicals in the pyrolysis of hydrazine. In these experiments the hydrazine saturated from a glass container into a heated quartz capillary through a central valve. The capillary was heated to a known temperature as a result of which the hydrazine decomposed into nitrogen, hydrogen, ammonia and some unstable products (Fedorov and Mironov, Ref.16). Fig.7 shows the distribution of like intensities in the mass-spectrum of hydrazine obtained by the charge transfer method using  $\text{NH}_3$  ions formed from ammonia. The pressure in the source was 10-12.5 mbar. For comparison, the dotted line shows the mass-spectrum obtained on hydrazine with 20 eV electrons. Fig.8 shows the intensity distribution obtained under similar conditions at 1000°C (dotted line) and 35°C (continuous lines). Acknowledgements are expressed to Yu. K. Berezin, B. G. Verchikov, N. G. Belov, N. M. Kurnosov and N. I. Marchin for assistance in this work. There are 6 figures and 10 references on this subject.

Card 4/6

The PMC-2 (B676-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

ASSOCIATION: Institut Khimicheskoy Fiziki AN SSSR (Institute of Chemical Physics, AS, USSR)

SUBMITTED: October 15, 1959

Fig.2

— reactor, III - ion gun, IV - small magnetic analyser,  
▼ - large magnetic analyser



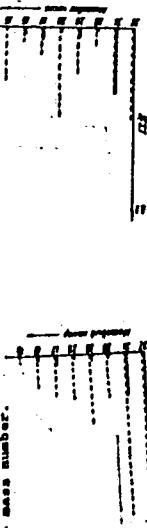
Card 5/6

B676/514

The PMC-2 (B676-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

FIG.7

Comparison of mass-spectra of hydrazine obtained on electron bombardment (dotted) and charge transfer from  $\text{NH}_3$  ions (full lines).  
Key: 1 - relative intensity,  
2 - mass number.



Card 6/6

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1. Institut fiziologii im. Bogomol'tsa AN UkrSSR, Kiyev.

PORADNYA, A.I., doktor tekhn. nauk, prof., retsenzent; VETROV, P.G.,  
inzh., retsenzent; GUR'YEV, O.I., kand. arkh. red.;  
KOROVKEVICH, V.V., inzh., red.; REYZ, M.B., red.izd-va;  
PUL'KINA, Ye.A., tekhn. red.

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Gosstroiizdat, 1963. 235 p.

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filial.  
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(MIRA 13:4)

(Industrial buildings)  
(Precast concrete construction)

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The "POR" valve for regulating heat output of one-pipe running-water radiators. Rata.i izobr.predl.v stroi. no.73:13-15 '54. (MLRA 7:6)  
(Radiators)

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859620019-0

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Assembling of distribution transformers Moskva, Glav. red. energ. lit-ry, 1936.

mic 53-517

Collation of the original 64 p.

Microfilm AC-115

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859620019-0"

**"APPROVED FOR RELEASE: 09/01/2001**

CIA-RDP86-00513R001859620019-0

FOR WORKING MODELS IN PREPARATION AND TAKING. THE WORKERS ARE TO BE PAID 80¢ AN HOUR AND

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20% polyvinyl alcohol.

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"APPROVED FOR RELEASE: 09/01/2001

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Shagal, N. E., jt. au. Assembling of distribution transformers Moskva, Glav.  
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What results from wrongly placed switch boxes. Zhel.dor.transp.  
37 no.10:59-60 0 '55. (MLRA 9:1)

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SO: Sum. No. 480, 9 May 55

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"Chamber system of mining in the mining industry" by S.G. Borisenko  
and F.A.Kopitsa. Reviewed by A.V.Kulikov, R.Sh.Azimov, S.V.Vetrov.  
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(Borisenko, S.G.)

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CIA-RDP86-00513R001859620019-0

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Some ship repair problems. Mor. flot. 7 no.10:45-46 0 '47.  
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APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859620019-0"

VETROV, V.

PA 30T97

1943/001 - Repair  
Shipbuilding

Oct 1947

"Some Questions on Ship Repairing," Engr Mechanic V.  
Vetrov, 1 p

"Morakoy Plot" No 10

Short discussion of ship repair problems, touching  
on the more complete preparation and planning by the  
ship's administration prior to coming into the yard  
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LC

30T97

VETROV, Vladimir Aleksandrovich, ed.

(The mineral resources of the Western Siberian region) "Ovotsibirsk, Ofiz, 1934-35" (49-44390)

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1. Mines and mineral resources - Siberia. I. Vasil'ev, Aleksandr Alekseevich, 1888- II. Vetrov, Vladimir Aleksandrovich, ed.

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CIA-RDP86-00513R001859620019-0

VETROV, VLADIMIR ALEKSANDROVICH, JT. ED.

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HC481. S5 L926

APPROVED FOR RELEASE: 09/01/2001

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The mineral resources of the Western Siberian region Novosibirsk, Ogiz. 1934-35. 3v.  
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TN110.S523

APPROVED FOR RELEASE: 09/01/2001

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VARSHAVSKIY, A.S.; SMIRNOV, I.A.; BATISHCHEV, V.A.; KANAYEV, G.Ye.;  
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Varshavskii i dr. Moskva, Profizdat, 1962. 270 p.  
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SEMELEV, Vladimir Iosifovich; VETROV, V.D., red.; RAKOV, S.I., tekhn.red.

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## PAGE 1 BOOK EXTRAPOLATION

Sov/NOT

Abstracts until 1959. Burevtechnicheskii Institut im. G.M. Frishmanovskogo

Producing convertible aircraft propellers. Abstracts G.M. Frishmanovskogo  
(problem of power flight) Collection of Articles Dedicated to Aeronautical  
Engineering. G.M. Frishmanovskogo. Moscow, 1959. 553 p. Printed only in part.

1,500 copies printed.

Editor: N. P. Polikarpov. I. D. Arshavin, P. V. Balashov, P. I. Galperin, and  
N. M. Polyakov. Texts: N. I. Ilyin, V. M. Ponomarenko, N. V. Vintar,  
V. M. Polyakov, N. S. Slobodchikov (intro.), V. I. Popov (pref.), A. S. Tsvetkov (concluding notes).  
Abstracts of Sciences USSR, V. I. Vayns, A. S. Tsvetkov, N. M. Polyakov,  
V. I. Chichikov, E. M. Ponomarenko, Candidate of Technical Sciences, A. S. Tsvetkov,  
Candidate of Technical Sciences, N. M. Polyakov, Candidate of Technical Sciences,  
and I. M. Slobodchikov.

NOTES: This collection of articles is intended as a reference to the history  
of development of aircraft propellers.

CONTENTS: The collection contains sixty articles by former students and  
graduates of the Moscow Aviation Institute. The articles deal with problems  
of a wide range of subjects in the field of power engineering: problems  
of the regional development of electrical and thermal power engineering,  
power engineering technology and the physics of combustion. In generalization  
are mentioned: fundamentals and general theory, new methods and articles.

Editor: N. G. V. A. Slobodchikov. Investigation of Heat Exchange in  
Polarized Condensers of Pure Waters

Editor: N. G. V. A. Slobodchikov. Basic Methods of the Present Theory of Heat Exchange  
of Radiation

425

Author: V. I. G. Slobodchikov. Photographic Method of Measuring Latent  
Heat

470

Author: V. I. G. Slobodchikov and I. K. Dorzhke. Effect of  
Hydrostatic Pressure on the Properties of Substances in Water Vapor on Boiler  
Water

475

Editor: V. M. The Basis of Science in the Development of Soviet Wind  
Turbine Technology

495

Author: V. M. K. G. Slobodchikov. Results of the Activity of the  
Institution for High-Power Steel and Structural Tubes in  
Developing the Reliability and Economy of Thermal Electric Power  
 Stations in the Future

505

Author: V. I. Basic Principles of Power Engineering  
of Fuels

505

Author: V. I. Principles of the Process of Separating Volatile  
Substances from Solid Fuels

525

Author: V. I. High-Speed "Particulation" of Solid Fuels (in part)  
G. G. Slobodchikov

525

Author: V. I. Intensity of Heating Fuels and Control of the  
Process of their Thermal Decomposition

525

Author: V. I. Theory of Combustion and Problems of Instability  
of the Processes of Heating  
G. G. Slobodchikov

525

Author: V. I. Intensity of Heating Fuels and Control of the  
Process of their Thermal Decomposition

525

Author: V. I. Power Engineering  
of Fuels  
G. G. Slobodchikov

525

Author: V. I. Power Engineering  
of Fuels  
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no.5:29-37 My '58. (MIRA 11:5)

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**Basic principles of alloying structural steels.** S. I. Sakhin and V. Ya. Vetrov. *Stal* 6, 280 (1949).

This investigation was concerned with methods for imparting to structural steel ductility and fibrous structure of the break. These properties were induced by regulating the rate of cooling after hardening. For each kind of steel tested, at a given hardness-testing temp., shape, etc., there was a crit. rate of cooling below which brittleness disappeared. The kind and quantity of alloying elements should be chosen so as to obtain as low a crit. rate of cooling as possible.

M. Horsch

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Radiolytic Sorbents. [6.1] Radiolytic Radio Isotopes 1. Radiation-Induced Polymerization (Reports of Soviet Scientists. V. 4; Chemistry of Radioactive Elements and Radiation Transformation) Moscow, Atomizdat, 1959. 323 p. 6,000 copies printed. (Series No: 1967)

St. (Title Page): A. P. Vinogradov, Academician; Ed.: V. I. Labanov; Tech. Ed.: Yu. Z. Neust. 371

PURPOSE: This collection of articles is intended for scientists and engineers interested in the applications of radioactive materials in science and industry.

CONTENTS: The book contains 26 separate studies concerning various aspects of the chemistry of certain radioactive elements and the processes of radiolysis effect on matter. These reports discuss presently methods of reproducing artificial nuclear fission, research in the chemistry of mercury, thorium, uranium, plutonium, and americium, problems related to the sorption and burying of radioactive wastes, the radiolysis of aqueous solutions and of organic compounds, the mechanics of polymer chain scission, and the effect of radiation on natural and synthetic rubbers. V. I. Labanov edited the present volume. Most of the reports are accompanied by references. Contributions to individual investigations are mentioned in annotations to the table of contents.

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